

AMENDMENTS TO THE CLAIMS

In the claims, please make the following amendments:

1. (Currently Amended) A support system for supporting a body or a portion thereof, comprising:

a foam ~~mattress, cushion, seating pad or similar~~ support structure having a top side and a bottom side, said support structure having containing a plurality of tapered vacant regions extending from said top side of said support structure to said bottom side of said support structure wherein said bottom side of said foam body structure is in fluid communication with said top side of said structure throughout the entire volume of said vacant regions while said support structure is in its relaxed state, said support structure being and configured to reduce local stresses on a supported body, reduce cross contamination between a patient and [[a]] patient surroundings, and reduce the incidence of dust mites into said support system;

a bladder or membrane impervious to gases or other fluids, completely encasing said ~~mattress, cushion, seating pad or similar~~ support structure, said bladder or membrane being sealed only along the periphery of the support structure;

a passageway means, to allow and control the ingress and egress of a gas or other fluid into or out of said vacant regions, within or around the support structure encased by said bladder or membrane; and

a pressure/vacuum pump to allow continuous variation of the fluid pressure within said bladder or membrane.

2. (Currently Amended) A support system according to claim 1 wherein ~~the support structure is a foam mattress in which portions of the support structure have been removed or omitted in one or more selected regions of the material, forming empty regions and the empty said vacant regions are~~ have the shape of a truncated cone or a bell-shaped region.

3. (Currently Amended) A support system for supporting a body or a portion thereof, comprising:

a foam ~~mattress, cushion, seating pad or similar~~ support structure having a top side and a bottom side, said support structure having ~~containing~~ a plurality of tapered vacant regions extending from said top side of said support structure to said bottom side of said support structure wherein said bottom side of said foam body structure is in fluid communication with said top side of said structure throughout the entire volume of said vacant regions while said support structure is in its relaxed state, said support structure being ~~and~~ configured to reduce local stresses on a supported body, reduce cross contamination between a patient and ~~[[a]]~~ patient surroundings, and reduce the incidence of dust mites into said support system;

a bladder or membrane impervious to gases or other fluids, completely encasing said ~~mattress, cushion, seating pad or similar~~ support structure, said

bladder or membrane being sealed only along the periphery of the support structure;

a passageway means, to allow and control the ingress and egress of a gas or other fluid into or out of said vacant regions, within or around the support structure encased by said bladder or membrane; and

a passageway means, to allow and control the ingress and egress of a gas or other fluid into or out of said vacant regions, within or around the support structure encased by said bladder or membrane;

wherein one or more of the edges of the ~~mattress, cushion, seating pad or other~~ body support surface structure is undercut such that the edge tapers inward toward the bottom of the support structure ~~mattress, cushion, seating pad or body support element~~.

4. (Currently Amended) A support system according to claim 1 wherein said ~~mattress, cushion, or seating pad~~ support structure is formed from a convoluted foam material.
5. (Currently Amended) A support system as in claim 1 wherein said ~~mattress, cushion, or seating pad~~ support structure is formed from a convoluted foam material and said convoluted foam material is inserted with smooth side upward and one or more cut-outs are made for the purpose of reducing local stresses on the body or sections thereof..
6. (Currently Amended) A support system according to claim 1 wherein the support structure provides for reduction of localized stresses by a modular construction technique

using different types of foam material in selected regions to form a composite foam structure ~~mattress~~.

7. (Currently Amended) A support system according to claim 1 wherein the support structure provides for reduction of localized stresses by a modular construction technique using different types of foam material encased in individual membranes in selected regions to form a composite foam structure ~~mattress~~.
8. (Original) A support system according to claim 1 wherein said bladder is permanently sealed to prevent any escape or replacement of the fluid contained therein.
9. (Currently Amended) A support system according to claim 1 wherein said bladder is enclosed by a ~~Ziploc or similar~~ sealingly, recloseable fastening means.
10. (Currently Amended) A device according to claim 1 wherein the support structure comprises a seat cushion and wherein said seat cushion contains provisions for localized relief of stress comprising one or more ~~tapered~~ regions where material has been removed or omitted selectively from said seat cushion.
11. (Original) A support system as in claim 1 where a variable orifice is contained within the encasing membrane to control the rate of gaseous exchange from within the membrane to outside of the membrane and vice versa.

12. (Currently Amended) A support system for supporting a body or a portion thereof, comprising:

a foam ~~mattress, cushion, seating pad or similar~~ support structure having a top side and a bottom side, said support structure having ~~containing~~ a plurality of tapered vacant regions extending from said top side of said support structure to said bottom side of said support structure wherein said bottom side of said foam body structure is in fluid communication with said top side of said structure throughout the entire volume of said vacant regions while said support structure is in its relaxed state, said support structure being and configured to reduce local stresses on a supported body, reduce cross contamination between a patient and [[a]] patient surroundings, and reduce the incidence of dust mites into said support system;

a bladder or membrane impervious to gases or other fluids, completely encasing said ~~mattress, cushion, seating pad or similar~~ support structure, said bladder or membrane being sealed only along the periphery of the support structure; and

a passageway means, to allow and control the ingress and egress of a gas or other fluid into or out of said vacant regions, within or around the support structure encased by said bladder or membrane.

13. (Currently Amended) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by:

placing a ~~mattress, cushion, seating pad or other~~ support structure, ~~designed or~~
configured to minimize localized stress concentrations caused by the
weight of the body thereon, within a bladder or membrane impervious to
gases or other fluids;
completely encasing said ~~mattress, cushion, seating pad or other~~ support structure,
said bladder or membrane being sealed only along the periphery of the
support structure; and
varying the fluid pressure in the ~~material~~ support structure as a means of
controlling the resiliency of said ~~material~~ support structure to the desired
support level.

14. (Currently Amended) A method for reducing the possibility of development of
deleterious body lesions in a human body under conditions of continued bed confinement
by:

placing a ~~mattress, cushion, seating pad or similar~~ support structure, configured to
minimize localized stress concentrations caused by the weight of the body
thereon, within a bladder or membrane impervious to gases or other fluids;
completely encasing said ~~mattress, cushion, seating pad or similar~~ support
structure;
varying the fluid pressure in the ~~material~~ support structure as a means of
controlling the resiliency of said ~~material~~ support structure to the desired
support level, wherein the support structure comprises a mattress
containing provisions for reduction of localized stresses in certain portions

of the body being supported by the removal of ~~tapered~~ portions of the mattress material in one or more selected regions.

15. (Currently Amended) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by:

placing a ~~mattress, cushion, seating pad or similar~~ support structure, configured to minimize localized stress concentrations caused by the weight of the body thereon, within a bladder or membrane impervious to gasses or other fluids;

completely encasing said ~~mattress, cushion, seating pad or similar~~ support structure;

varying the fluid pressure in the ~~material~~ support structure as a means of controlling the resiliency of said ~~material~~ support structure to the desired support level, wherein the support structure contains provisions for reduction of localized stresses by the removal of portions of the support structure in one or more selected regions forming a plurality of vacant regions, where said vacant regions are in the shape of an upright truncated cone.

16. (Currently Amended) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by:

placing a ~~mattress, cushion, seating pad or similar~~ support structure, configured to
minimized localized stress concentrations caused by the weight of the
body thereon, within a bladder or membrane impervious to gases or other
fluids;
completely encasing said ~~mattress, cushion, seating pad or similar~~ support
structure; and
varying the fluid pressure in the ~~material~~ support structure as a means of
controlling the resiliency of said ~~material~~ support structure to the desired
support level, wherein the support structure contains provisions for
reduction of localized stresses by means of cutting or slicing ~~tapered~~
portions of the ~~mattress-material~~ support structure in one or more selected
regions.

17. (Canceled)

18. (Currently Amended) A method for reducing the possibility of development of
deleterious body lesions in a human body under conditions of continued bed confinement
by:

placing a ~~mattress, cushion, seating pad or similar~~ support structure, configured to
minimize localized stress concentrations caused by the weight of the body
thereon, within a bladder or membrane impervious to gases or other fluids;

completely encasing said ~~mattress, cushion, seating pad or similar~~ support structure, said bladder or membrane being sealed only along the periphery of the support structure;

varying the fluid pressure in the ~~material~~ support structure as a means of controlling the resiliency of said ~~material~~ support structure to the desired support level, wherein the support structure comprises a seat cushion and said seat cushion contains provisions for localized relief of stress comprising one or more ~~tapered~~ regions where material has been removed selectively from the seat cushion, wherein said regions allow fluid communication from the bottom side of said seat cushion to the top side of said seat cushion throughout the entire volume of said regions.

19. (Currently Amended) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by:

placing a ~~mattress, cushion, seating pad or similar~~ support structure, configured to minimize localized stress concentrations caused by the weight of the body thereon, within a bladder or membrane impervious to gases or other fluids; completely encasing said ~~mattress, cushion, seating pad or similar~~ support structure;

varying the fluid pressure in the ~~material~~ support structure as a means of controlling the resiliency of said ~~material~~ support structure to the desired support level, wherein one or more of the edges of the ~~mattress, cushion, or seating pad~~ support structure is undercut such that the edge tapers inward

toward the bottom of the support structure ~~mattress, cushion, or seating pad~~.

20. (Currently Amended) A method according to claim 13 wherein said ~~mattress, cushion, or seating pad~~ support structure comprises a plurality of modules, separated from one another and contained within individual fluid-tight membranes or bladders.

21. (Currently Amended) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by:

placing a ~~mattress, cushion, seating pad or similar~~ support structure, configured to minimize localized stress concentrations caused by the weight of the body thereon, within a bladder or membrane impervious to gases or other fluids; completely encasing said ~~mattress, cushion, seating pad or similar~~ support structure;

varying the fluid pressure in the ~~material~~ support structure as a means of controlling the resiliency of said ~~material~~ support structure to the desired support level, wherein said ~~mattress, cushion, or seating pad~~ support structure is formed from a convoluted foam material.

22. (Canceled)

23. (Currently Amended) A method for reducing the possibility of development of deleterious body lesions in a human body under conditions of continued bed confinement by:

placing a ~~mattress, cushion, seating pad or similar~~ support structure, configured to minimize localized stress concentrations caused by the weight of the body thereon, within a bladder or membrane impervious to gases or other fluids; completely encasing said ~~mattress, cushion, seating pad or similar~~ support structure, said bladder or membrane being sealed only along the periphery of the support structure;

varying the fluid pressure in the ~~material~~ support structure as a means of controlling the resiliency of said ~~material~~ support structure to the desired support level, wherein the support structure comprises a seat cushion and wherein said seat cushion contains provisions for localized relief of stress comprising one or more ~~tapered~~ regions where material has been ~~removed~~ ~~or~~ omitted selectively from said seat cushion, wherein said regions allow fluid communication from the bottom side of said seat cushion to the top side of said seat cushion throughout the entire volume of said regions.

24. (Original) The support system of claim 12 further comprising a pressure/vacuum pump to allow continuous variation of the fluid pressure within said bladder or membrane.

25. (Currently Amended) The support system of claim 12 wherein said bladder or membrane is enclosed by a ~~Ziploc or similar~~ sealingly, recloseable fastening means.